

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application:

The Claims

1-6. (**Canceled**).

7. (**Currently Amended**) A method for parsing an input data stream, comprising:
storing a history buffer for containing an unencoded version of at least one previously encoded string;

comparing a string from said input data stream with said unencoded version of at least one previously encoded string to identify matches between character strings in the string from said input data stream and character strings in the unencoded version of the at least one previously encoded string;

storing: an indicator that there exist at least two matches ~~found by said first comparison component~~, identified, and potential tokens corresponding to said at least two matches for a plurality of alternate encodings;

for each alternate encoding in the plurality of alternate encodings, summing ~~potential token lengths of the potential tokens in the alternate encoding~~ to provide a total potential token lengths length for the alternate encoding;

comparing said total potential token lengths to determine a shortest total potential token length;

selecting ~~a match~~ an encoding corresponding to a the shortest total potential token length to represent said string from said input data stream; and

~~emitting~~ generating tokens encoding information representing said ~~match corresponding to a shortest total token length selected encoding~~.

8. (Original) A method as claimed in claim 7, wherein said tokens comprise compressed data corresponding to said at least two matches.

9. (Original) A method as claimed in claim 8, wherein said compressed data comprises adaptive dictionary based compressed data.

10. (Original) A method as claimed in claim 7, wherein said tokens comprise

encrypted data corresponding to said at least two matches.

11. (Original) A method as claimed in claim 7, wherein said tokens comprise message digest data corresponding to said at least two matches.

12-16. **(Canceled).**

17. **(Currently Amended)** A method to parse an input data stream that comprises a string, comprising:

storing an unencoded version of at least one previously encoded string;

comparing a string received from the input data stream with the stored unencoded version of at least one previously encoded string to determine a case where there exist at least two matches a selected plurality of alternate encodings of the string received from the input data stream;

determining tokens corresponding to the at least two matches each alternate encoding in the plurality of alternate encodings;

for each alternate encoding in the plurality of alternate encodings, summing potential token lengths of the tokens corresponding to an alternate encoding to output determine a total potential token lengths length for the alternate encoding; and

outputting a token encoding information corresponding to an alternate encoding having a shortest total potential token length to represent the string from the input data stream.

18. **(Canceled).**

19. **(New)** The method of claim 7, where the encoding information comprises instructions to at least one of output a literal and output a token.

20. **(New)** The method of claim 7, where the length of a token depends on a length of a matched character string.

21. **(New)** The method of claim 7, further comprising generating an encoded version of the string from the input data stream based on the encoding information.

22. **(New)** The method of claim 17, where the encoding information comprises instructions to at least one of output a literal and output a token.

23. **(New)** The method of claim 17, where the length of a token depends on a length of a character string.

24. **(New)** The method of claim 17, further comprising generating an encoded version of the string received from the input data stream based on the encoding information.

25. **(New)** A method as claimed in claim 24, wherein the encoded version comprises compressed data.

26. **(New)** A method as claimed in claim 25, wherein the compressed data comprises adaptive dictionary based compressed data.

27. **(New)** A method as claimed in claim 24, wherein the encoded version comprises encrypted data.

28. **(New)** A method as claimed in claim 24, wherein the encoded version comprises message digest data.